

search? Mr. W. H. Massey, the well-known engineer, tells me that he once offered a reward of 1000*l.*, which he advertised in the papers, to any one who could give a single conclusive demonstration of telepathy. In reply he did not get one single offer, and was told by an eminent authority on the subject that it was absurd to expect that telepathy could be done to order, and that it only occurred apparently spontaneously and on rare occasions. What sane scientific man would believe in any physical phenomenon which, once experimentally obtained, could not be reproduced at will and with certainty; and why should we treat psychical phenomena upon any different basis?

Dr. Tillyard objects to my strictures on the word 'national' as applied to a psychical research laboratory, which is so new that it has not yet even got into the London Directory. No doubt there are hundreds of concerns calling themselves 'national.' Some are really national institutions, and others assume this position. Most are merely commercial concerns, in many cases insignificant ones, wishing to advertise their commodities and give themselves a name by which they hope to magnify their small importance. Thus, I find that 'national' is even adopted by a firm of funeral undertakers. It is the same spirit that leads caravanserais that by no means deserve the appellation to call themselves 'Grand' or even 'Majestic.' When we come, however, to a new scientific institution the object of which is, I assume, the serious elucidation of truth, then I cannot think that it was a happy idea to begin this comparatively minor institution's career by calling it by a pretentious name to which it has no real claim, and may easily be confused by the ignorant with another really national laboratory of vast importance.

I have, however, no wish to labour this point, in regard to which Dr. Tillyard has attacked me. It was only a minor issue in my letter in *NATURE* of September 25, where the principal reason I gave for declining Dr. Tillyard's kind invitation was that, in my opinion, thermographic phenomena in connexion with mediums are more a matter for a physiologist than for a physicist.

Dr. Tillyard, however, broadly accuses me of "an unscientific attitude to the subject of psychical research." This he bases on his belief that I have never been to a spiritualistic—or shall we say psychical—séance, and never intend to go to one. I must defend myself against this charge; but here I must first differentiate between what, on one hand, I would call spiritualistic séances, where professional mediums are employed, and where spirits, either directly visible or through mediumistic agency are vocal or mechanically active, are supposed to be conjured up, and secondly, séances or meetings at which such things as telepathy are experimented with, where no mediums are requisite. Let me say at once that I have taken part in numerous serious meetings of the latter kind, where telepathy without contact was attempted, but have never met with even the slightest evidence of what could be called success. This, I may add, has been always to my exceeding disappointment, as was also the case when I tried most strenuously to repeat Blondlot's *N*-ray experiments. In both cases at first I fully expected to succeed, just as I did succeed when I repeated Röntgen's X-ray experiments when these were first announced, and before they had been confirmed by any one else in England.

As regards the other type of spiritualistic séances, I think I can honestly say that if I have in the past never attended such, this is for the reason that I have never been invited to attend one, as I am sure, in the days when I delighted in Maskeleyne and Cook's

Egyptian Hall of Mysteries, and also enjoyed wonderful thought-reading exhibitions by Stuart Cumberland and others, I should have jumped at such an invitation. As regards the present and the future, however, perhaps increasing age and experience have given me a greater sense of responsibility, and my present attitude is that I do not think it right to give any countenance to proceedings where I should fully expect to be misled, and afterwards told that, anyway, I could not explain the phenomena I had been shown, and that therefore there must be something supernatural in them.

My firm conviction is that, as in the past, so at present, there is overwhelming evidence that at all spiritualistic séances where there are ghostly apparitions, spirit voices, and any kind of communication with what is supposed to be another world, the phenomena are invariably due to fraud—not necessarily conscious, perhaps in some cases subconscious, but absolute fraud all the same. I have already been taken to task for the use of this ugly word 'fraud' in this particular connexion, but I get it from no less a master in science than Lord Kelvin, who used frequently to say that all the phenomena of what he called that 'wretched superstition of spiritualism,' when not to be explained by 'defective observation,' were due to 'fraud.' If it is considered an unscientific attitude to refuse to have any dealings with fraud, then I prefer to be thought unscientific, for I agree with the book of Ecclesiasticus that "He that toucheth pitch shall be defiled therewith."

In conclusion, let it not be supposed that I impute anything worse than undue credulity to our very few really eminent scientific spiritualistic believers, past and present, who I am sure were or are quite honest in what they thought or think to be their pursuit of truth. Of these I would only repeat the words of my countryman, David Hume, who, speaking of miracles more than one hundred years ago, asked the simple question as to whether it was more probable that these very extraordinary and unprecedented things did actually happen, or whether the observers or narrators of them were mistaken.

A. A. CAMPBELL SWINTON.

40 Chester Square, S.W.1,

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ONE wonders who are the onlookers who would be so 'unwise' as to elevate any of the three 'hypotheses' mentioned by Sir Oliver Lodge (*NATURE*, October 30, p. 622) to the "high status required of a scientific theory." Few would dignify even by the term hypothesis what are simply observations. Granted genuine phenomena, how much further are we scientifically? Granted 'ectoplasm,' can science justify repetitions of the human vivisection necessary to produce it when there is no purpose, except curiosity, in view? Granted an 'intelligence' behind the phenomena, can science say to which order amongst the myriad intelligences of Nature such belongs? Granted a 'spirit' hypothesis, can science describe or define spirit?

If the function of science be to discover the *rationale* of all facts of human experience, it follows that it can serve and protect mankind only in so far as it discharges this function. None of the many eminent men of science in European countries and the U.S.A. who, during the last seventy-five years, have attested the reality of psychic phenomena, have advanced a scientific theory of the cause. If present-day investigators would make themselves acquainted with what has been done by their predecessors (who were equally competent and disinterested), they would

find that there are no grounds for believing that we know any more about the phenomena than men of science did fifty years ago; and truth to say, the 'hypotheses' advanced then were much more philosophically phrased and discussed. I should also like to ask on what authority Sir William Crookes is labelled a 'spiritist.' He, with the majority of men of science who have been interested, dropped the investigations when convinced of the facts, because it was found that the phenomena were mainly repetitions of what had been already widely recorded in a large body of literature in various ages and countries, and that no new scientific facts could be deduced from recurrent sporadic phenomena, unconnected with existing scientific knowledge, and beyond the control of men of science.

More recently another type of 'researcher' has persisted in certain investigations without either the justification of a 'spiritist' belief or the sanction of scientific prevision. What is the motive? What can be the motive when, after fifty years of psychical research, the problem is exactly where it was in the Dark Ages, during which the Church, at least, discouraged human vivisection and also necromancy? These are strong words; but are investigators unaware of the fate of the majority of mediums, many of whom in the beginning are simple, honest, but sensitive human types? Do they not know how frequently degeneracy gradually ensues from the use of the mediumistic faculty? In the lives of mediums are many strange and terrible tales of immorality, sensuality, obsession, insanity, and crime. Those who have studied the history of this subject know, too, how often investigators have completely lost and never recovered their own reason once they have resigned their self-control to follow the dictates of an unknown 'guide.' Zöllner was not the first or the last to suffer this penalty.

It would be dangerous, therefore, to accept blindly Sir Oliver Lodge's counsel to "follow our leaders." He is a great man of science. We accept his authority in matters of physics, as we accept facts of astronomy, etc., from other men of science, and are glad to do so, as we know they have undergone the necessary training and discipline to become specialists in their subjects. They speak with the authority of knowledge and do not ask us to follow other unknown leaders of whose *bona fides* they or we know nothing.

On what authority, however, can any of the modern 'scientific investigators' of psychic phenomena ask us to accept their fancies about a *spiritual* world? Have they attained knowledge by self-discipline, self-sacrifice, and the experience of trials overcome? Have they shown any signs of the power reputed to be possessed by religious teachers and Wise Men, 'mediators,' of old, who could themselves control the energies of the lower 'psychic' world, cast out 'evil spirits' from the insane and obsessed unfortunates, and deliver clear and inspiring teaching from a serene, spiritual level so far above the commonplace 'communications' that issue via mediums as science is (or ought to be) above vanity?

The younger 'psychical researchers' would be better engaged in compiling a history of the lives of mediums and collecting statistics of the periodic epidemics of psychism, which latter should be plotted with waves of crime. An inquiry might be made also as to why the mediumistic practices encouraged amongst us to-day were forbidden by the Hindus and all Eastern religions before their decline. Neither the religion nor the science of our times understands what was evidently part of the knowledge of ancient scientific religion. Hence the danger.

W. W. L.

THERE cannot be much doubt that Sir Oliver Lodge (*NATURE*, October 30, 1926, p. 623) wishes to compare the attitude of an hypothetical race of "secluded, but intelligent aborigines," towards rumours of X-rays, telephones, radio telegraphy, and the existence of a hitherto unsuspected race of white men—with that of present-day opponents of what is called 'spiritualism.' This comparison, in my opinion, is unsound. In the first place, it would be possible for any one of the aborigines mentioned to insist that the believers in X-rays, and other things of a like nature, conduct him to the part of the world where these phenomena were alleged to be produced, in order that he might examine them. Further, upon arrival, he would be met by actual individuals of the race of white men, as to whose existence he had harboured doubt, and these people, of flesh and blood like himself, would proceed to show him the phenomena in actual operation, and, I take it, explain to him, in a perfectly rational and detailed manner, how they were brought about. Such a demonstration, which could be repeated, under ideal conditions for seeing and understanding, as many times as the aborigine wished, would, without question, convince him that the rumours he had heard in his own country were based upon fact, as it would any other reasonable person.

In the case of the disbeliever of the claims of modern spiritualists, no such rational and clear demonstration is vouchsafed. He is unable to converse in a normal manner with the 'intelligences' who, it is asserted, are responsible for the production of the 'occult' phenomena, and no spiritualist is able to give him the slightest real inkling as to how these phenomena are produced. In fact, to use Sir Oliver Lodge's words, he finds himself in the hands of "gropers in a tangled region off the obvious track," and cannot be blamed if his disbelief is merely increased by such an unsatisfactory experience.

Not only is the comparison under discussion unsound: it is also unfortunate. Aborigines, like certain people of the present day, though intelligent in some things, are nevertheless found to be willing believers in even the most preposterous of 'ghosts,' and would thus be most unlikely to doubt the statements (regarding X-rays and other similar phenomena) of those of their companions whose observations they had been in the habit of treating with respect.

J. REID MOIR.

Patent Law and Unemployment.

IN a leading article in *NATURE* of September 18, it is argued that the increase in the percentage of patents kept alive to the end of the fourteenth year since 1905 is due to official examination for novelty introduced in that year. I submit that this reasoning does not hold good. The rise preceded the year 1905, as the following figures will show:

Year.	Sealed.	Paid 14th year's Tax.	Percentage.
1897	14,465	442	3.0
1901	13,995	594	4.2
1902	15,242	596	3.9
1903	15,105	653	4.3
1904	16,124	804	4.9

Prior to the Act of 1883 the percentage was much higher—nearly 10 per cent. for 1876. Probably many factors unite in determining the variation of the percentage. The market value of patents depends upon their industrial value in a given period, and this value will depend upon their property of being used for the promotion or obstruction of home industries. Hitherto